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Technical, Human, and Conceptual Skill Development for Potential Foodservice Administrators in Four-Year Degree Programs

John E. Brady
University of Tennessee, Knoxville

To the Graduate Council:

I am submitting herewith a thesis written by John E. Brady entitled "Technical, Human, and Conceptual Skill Development for Potential Foodservice Administrators in Four-Year Degree Programs." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Food Science and Technology.

Mary Jo Hitchcock, Major Professor

We have read this thesis and recommend its acceptance:

William A. Poppen, Michael Evans

Accepted for the Council:
Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

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and recommend its acceptance:

William A. Poppen

Michael Evans

Accepted for the Council:

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Vice Chancellor
~~Graduate Studies~~ and Research

TECHNICAL, HUMAN, AND CONCEPTUAL SKILL DEVELOPMENT FOR POTENTIAL FOODSERVICE ADMINISTRATORS IN FOUR-YEAR DEGREE PROGRAMS

A Thesis
Presented for the
Master of Science
Degree
The University of Tennessee, Knoxville

John E. Brady
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ABSTRACT

An inquiry was conducted to investigate the need for technical, human, and conceptual skills in the foodservice industry and to investigate the role of baccalaureate degree programs in developing these skills for potential foodservice administrators. Technical, human, and conceptual skills are collectively referred to as administrative skills.

Courses in colleges and universities which emphasize administrative skills, were identified and used in the development of a Semantic Differential scale. The purpose of the Semantic Differential scale is to measure the meaning of specific concepts by various people by having them judge the concept against a series of descriptive scales. The Semantic Differential scale developed for this study was used to compare the attitude of educators and foodservice industry executives toward technical, human, and conceptual skills.

A modified Likert scale was developed for assessing baccalaureate degree programs in meeting industry needs for technical, human, and conceptual skill development. Responses to the scale can be made in terms of both direction, positive or negative, and intensity, strongly or slightly.

A profile sheet was included with the scales. The scales and profile data were answered in their entirety by the fifteen educators and thirty-four industry executives responding to the survey.

To test for significance of difference, the null hypothesis that no difference exists between the attitude of educators and industry executives toward the three administrative skills was assumed. The mean scores of educators and industry executives from the Semantic Differential scale were analyzed by a two-way analysis of variance. Based on the results of the ANOVA, the null hypothesis was rejected.

In order to isolate where the differences in attitude between the two groups were, t test analysis for independent samples was conducted. Null hypotheses that there is no difference between the attitude of educators and industry executives toward technical skills, toward human skills, and toward conceptual skills were assumed. The null hypothesis that there is no difference between the attitudes of educators and industry executives toward technical skills was rejected at the .05 level. The null hypothesis that there is no difference between the attitudes of educators and industry executives toward conceptual skills was rejected at the .05 level.

Results of the Likert scale revealed that educators and industry executives felt that human and conceptual

skills are more important than technical skills for foodservice administrators. Therefore more emphasis should be placed on human and conceptual skill development in baccalaureate degree programs as opposed to technical skills. Although both groups felt human and conceptual skills were more important than technical skills for foodservice administrators, their view of college graduates was different. Educators felt that baccalaureate degree programs prepared students for managerial positions in the foodservice industry whereas industry executives felt students were prepared as technicians.

To test for significance of difference, the null hypothesis that no difference in attitude exists between educators and industry executives that baccalaureate degree programs in foodservice administration are meeting industry needs for technical, human, and conceptual skill development was assumed. The null hypothesis was rejected.

Since each unique course or concept on the Semantic Differential scale represented a specific administrative skill, the difference in attitude toward technical and conceptual skills may only be a matter of intensity as educators generally scored courses higher than industry executives. Furthermore, the differences between the two groups could also be attributed to the way they define the

administrative skills, their perception toward graduates, or both.

By their own admission, both groups believe a communication gap exists between them. A coalition between educational institutions and the foodservice industry is highly recommended to remedy this problem. Further research of this nature is also recommended to better define administrative skills and the type courses necessary to develop these skills.

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GLOSSARY OF TERMS

Administrative skills--a term used to collectively refer to technical, human, and conceptual skills.

Conceptual skills--involves the ability to see an organization as a total system which interacts with other systems external to the organization; creativity.

Delphi technique--a process for eliciting and refining group judgements through a systematic written solicitation of the opinions of knowledgeable individuals.

Educators--persons in charge of teaching foodservice related courses in higher education.

Function--a special activity or performance required in the course of work; to act in a required or expected manner.

Foodservice industry--one of the randomly drawn commercial firms listed in Restaurants and Institutions annual directory of the largest hotel, restaurant, and institutional food management firms in the United States.

Human skills--the ability to work with people rather than physical objects and deals with perceptions and behavior.

Industry executives--vice-presidents or equivalent for foodservice firms.

Likert scale--a method of measuring responses in terms of direction, positive or negative, and in terms of intensity, strongly or slightly.

Position--any specific employment for salary or wages; rank; status.

Role--a function or office assumed by someone.

Semantic Differential scale--a method of observing and measuring the psychological meaning of things, usually concepts.

Technical skills--those which provide knowledge and proficiency in a specific kind of activity involving methods, processes, procedures, or techniques.

CHAPTER I

INTRODUCTION

For over half a century the field of management has been so devoted to progress and change it has failed to seriously address the basic question: What do managers do? In 1916, French industrialist Henri Fayol introduced four key words to describe what a manager does: plan, organize, coordinate, and control. At best these words indicate some managerial objectives but tell little about what managers actually do (Mintzberg, 1975).

Mintzberg (1975) suggested that a manager's job be classified into interpersonal roles, informational roles, and decision roles whereas Katz (1955) catagorized administrative skills as technical, human, and conceptual. Rappole (1974) contended that the foodservice manager of the future will be poorly prepared unless functional revisions to the educational curricula are made to correspond to the needs in the industry.

Powers (1980) emphasized that technical skill development is important in curriculum development but programs which stress human and conceptual abilities should not be de-emphasized. Lukowski et al. (1974) found that courses which develop inspiration, initiative, and creative thinking and those which deal with human emotions ranked one and two respectively among chief executive

officers. In addition, Matthews et al. (1975) found that courses such as communication skills, evaluating, sanitation, and decision making skills should be emphasized whereas Koppel (1978) found that industry executives were concerned with such areas as increasing productivity, improving management and administrative practices, and maintenance of cost controls.

In order to develop curriculums in meeting the administrative needs of industry, effective communication is needed between educational institutions and the foodservice industry. Therefore the purpose of this research was to investigate the need for administrative skills in the foodservice industry and the role of baccalaureate degree programs in developing these skills for potential foodservice administrators. The objectives of this research were:

1. To compare the attitudes of educators and foodservice industry executives toward technical, human, and conceptual skill development.
2. To assess four-year baccalaureate degree programs in foodservice administration in meeting industry needs for technical, human, and conceptual skills.

CHAPTER II

REVIEW OF LITERATURE

I. ROLES OF A MANAGER

If a manager were asked what he does, he would probably say that he plans, organizes, coordinates, and controls. However, observations generally show that managers do not always follow this classical view. Mintzberg (1975) professed that until the basic question of "what do managers do" is resolved, it is virtually impossible to teach management, design management systems, or improve the practice of management.

In order to better define what managers do, Mintzberg (1975) classified a manager's job into three roles i.e., interpersonal role, informational role, and decision role. Within the interpersonal role is a figurehead function which comes by virtue of his position in the organizational structure. This function is mostly ceremonial in nature and requires no important decision making ability. An example of this function would be presiding over an award ceremony or entertaining an important client. Mintzberg (1975) found that twelve percent of a chief executive's time was spent on ceremonial duties. Such duties are important to the functioning of an organization and cannot be ignored.

In addition to the figurehead function, the manager performs a leadership function and a liaison function. The leadership function requires the manager to be responsible for the people under him. This function grants the manager formal authority which the manager must possess in order to motivate those under him so that organizational goals and objectives can be met. The liaison function constitutes the horizontal contacts the manager makes outside his chain of command. A study by Rosemary Stewart, as reported by Mintzberg (1975), found that top managers spent 47% of their time with peers, 41% of their time with people outside their unit, and 12% of their time with superiors. The liaison function is vital for the manager to build an effective information system.

The second role of a manager which evolves from the liaison function is the informational role. Through this role the manager performs as monitor, disseminator, and spokesman. As monitor he gathers information, mostly verbal, from his subordinates, peers, and his liaison contacts. The manager then passes some of this information to others within his unit. The manager must then share information with people outside his unit. As spokesman the manager may share information with shareholders, a community, or even government officials. The informational role, as the name implies, involves

gathering and promulgating data necessary to accomplish organizational goals and objectives (Mintzberg, 1975).

The decision role stems from the manager's position of authority. The basic input in making decisions is information. The manager, as entrepreneur, seeks out improvement to his unit, adapts to change, and in fact initiates changes based on the information he has gathered. Just as the entrepreneur function casts the manager as the initiator of change, the function of disturbance handler casts the manager as involuntarily responding to pressure. There are no organizations so systematically well run that unknown situations can't arise (Mintzberg, 1975).

Within the realm of decision maker, the manager is also a resource allocator. Here the manager commits manpower, materials, money, and time. Finally, the manager must perform the function of negotiator. Studies have shown that much of a manager's time is spent in negotiations. Many may perhaps be routine but they are nevertheless an intergral part of the manager's job and only he has the information vital to important negotiations (Mintzberg, 1975).

II. MANAGER'S ADMINISTRATIVE SKILLS

Obviously, a manager must possess particular skills in order to succeed in these complex managerial roles.

Katz (1955) catagorized administrative skills as technical, human, and conceptual. Technical skills are probably the most familiar and are required by the greatest number of people. Such skills imply knowledge and proficiency in a specific kind of activity "particularly ones involving methods, processes, procedures, or techniques" (Katz, 1955, p. 34). Human skills, as the name implies, focus on working with people rather than physical objects. This skill deals with perceptions and behavior. That is to say, how the manager perceives or understands what others mean by their words and actions and how the manager reacts toward those perceptions. Conceptual skills involve the ability to see the organization as a total system which interacts with other systems external to the organization. Conceptual skills are sometimes referred to as creative ability. This involves the manager's perception of the organization, how the organization should grow, and his reaction or behavior toward that perception in order to achieve company objectives (Katz, 1955).

Katz and Kahn (1978) applied Talcott Parson's model of levels of organization to a foodservice management organization. At the very top is the institutional system which is a small group of people responsible for interacting with systems external to the organization. Under this is the managerial system which is responsible

for the internal administration of company policies. Last is the technical system which is responsible for carrying out the work of the organization. This concept is exhibited in Figure 1. Powers (1980) merged Katz's technical, human, and conceptual skill levels with Parson's model as shown in Figure 2.

As previously mentioned, technical skills are needed primarily by unit level managers in the day-to-day operation of their facility. Such skills include, but are not limited to, control over food cost, quality and quantity control, sanitation, and scheduling employees. Human skills are those which deal with working well with other people and developing an effective team. These skills are important at all levels of management but are particularly crucial at the lower and middle management levels. Conceptual skills, which refer to an administrator's creative ability, are a secondary need for middle management levels and a primary need for upper management levels (Powers, 1980).

III. EDUCATOR'S ROLE VERSUS INDUSTRY'S ROLE

Senior managers of today have traditionally been taught the technical skills essential for the daily operation of a foodservice facility. These skills are essential for those who desire to advance from the technical system to the managerial system. Powers (1980) stated

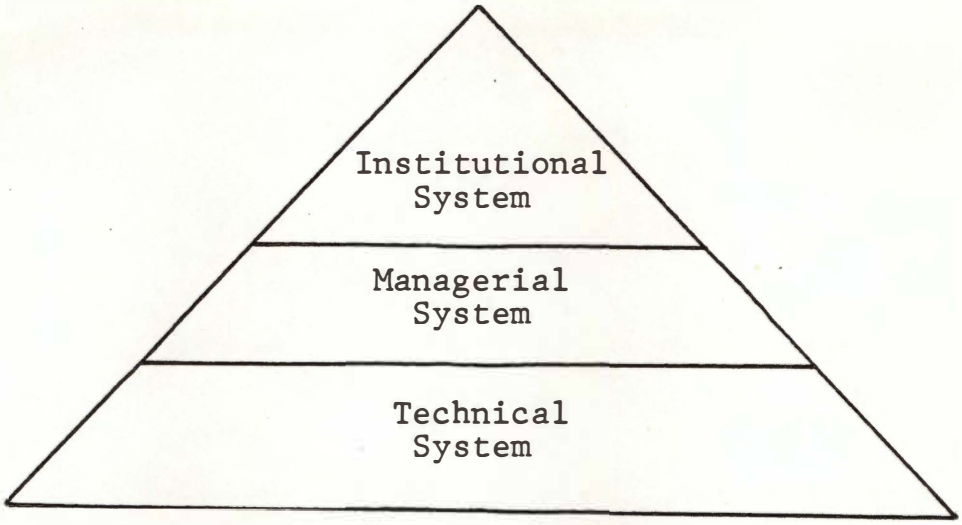

Figure 1. Model of levels of organization.

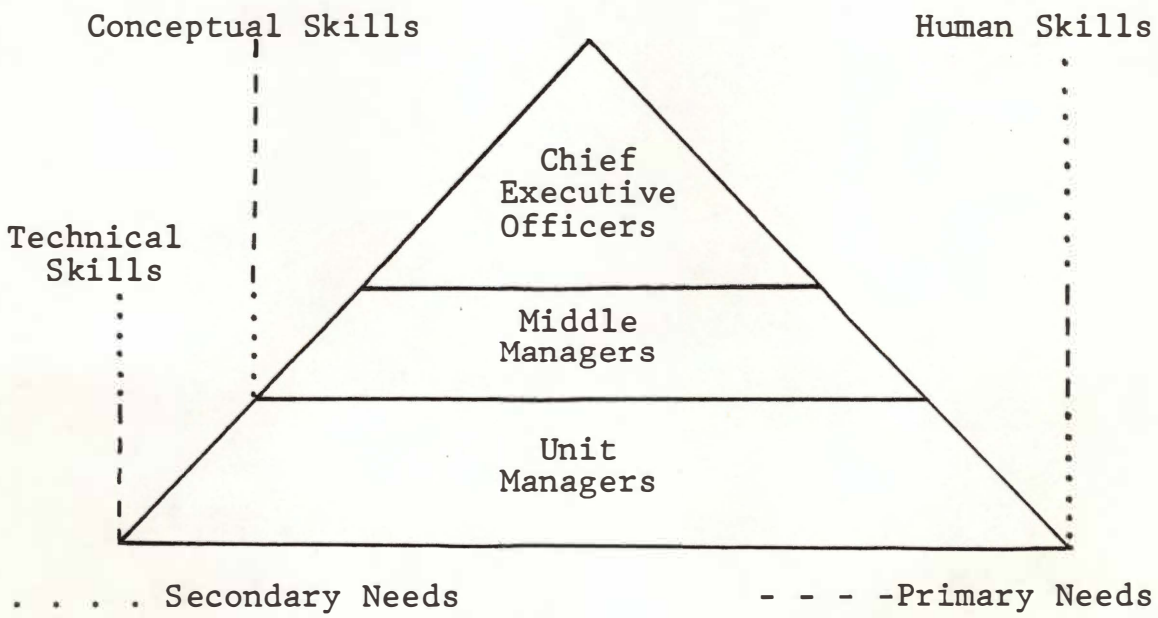

Figure 2. Katz's model merged with Parson's model.

Source: Powers, Thomas F., "Hospitality Management Development for the 1980's," The Cornell Hotel and Restaurant Management Quarterly, February, 1980, 20(4), pp. 40-41.

that foodservice executives often have two common characteristics. First, many came up through the ranks in operations and thus mastered the technical skills. Second, they lack human and conceptual skills. Their organizations value technical skills but do not provide opportunities to develop the human and conceptual skills.

Most two-year college programs emphasize teaching technical skills in their curriculum. Powers (1980) contended that educational institutions should continue to teach technical skills to future managers and he also suggested that educational institutions and industry share a dual role in teaching human and conceptual skills. Technical management skills are also an important part of a baccalaureate program, however such programs may become "vocationalized" at the expense of developing problem-solving or conceptual abilities. Programs which stress human and conceptual skill development should not be de-emphasized just because they make some students feel uncomfortable (Powers, 1980).

The literature indicates there is no shortage of courses to develop technical skills in today's foodservice curriculum. Indeed, there may well be an overabundance of such courses particularly when considering both two-year and four-year curriculums.

Thurow (1977) contended that industry can often teach technical skills more effectively and efficiently than can

universities. Specific courses which generally deal with technical skill development include, but are not limited to, purchasing, accounting, layout and design, and quantity cooking. Human and conceptual skill development include, for example, marketing, financial management, systems analysis, and organizational behavior. Such skill development should be an integral part of educational curricula (Powers, 1980).

Powers (1980) further suggested that both industry and universities share a dual role in teaching human and conceptual skills. These are the very courses that teach students to think like managers. Work-study programs designed to give students practical experience in applying technical, human, and conceptual skills have been emphasized by Rappole (1974), Blomstrom (1974), and Powers (1980). Harvard University offers specialized courses for senior managers. Such courses as business policy, marketing management, and management information systems are emphasized. The objective of this program is not to make technicians out of managers but to give the managers a better perspective on the potential, as well as the limitations, of such tools. In other words, the emphasis is conceptual rather than technical (Powers, 1980). Landmark (1974) recalled that graduation is the start, or commencement, of a career which further supports the important role of industry in career development.

IV. DETERMINING EDUCATIONAL NEEDS

Obviously, before curriculums can be established, a determination of the educational needs of foodservice administrators must be established. Matthews et al. (1975) and Koppel (1978) utilized the Delphi Technique in order to make such a determination. Matthews et al. (1975, p. 494) defined Delphi "as a process for eliciting and refining group judgements through a systematic written solicitation of the opinions of knowledgeable individuals." The Delphi Technique utilizes a series of questionnaires to gather data. The first questionnaire normally gathers profile data on the participants. Each subsequent questionnaire is based on the responses from the preceding questionnaire. When a consensus is reached, or when it is determined that no consensus can be reached, the process terminates. Data is then statistically analyzed in order to make predictions such as trends or priorities (Koppel, 1978).

Matthews et al. (1975) found that subjects which should be emphasized are communication processes, problem solving, evaluation, decision making, and sanitation. Also, more emphasis should be placed on courses such as business administration, behavioral science, facility design, food storage, and work experience. Koppel (1978) found that training personnel in order to increase productivity and morale was a primary concern of the foodservice

industry followed by establishment and maintenance of cost controls, sanitation, complying with government regulations, improving management and administration practices, and increasing volume with less energy.

Lukowski et al. (1974) utilized a Semantic Differential scale in investigating the attitudes of educators, chief executive officers, and chief personnel officers toward higher education. Semantic Differential, as defined by Kerlinger (1964, p. 564), is "a method of observing and measuring the psychological meaning of things, usually concepts." The purpose of the scale is to measure the meaning of specific concepts by various people by having them judge the concept against a series of descriptive scales (Osgood et al., 1957). He found that courses which develop inspiration, initiative, and creative thinking and those which develop the ability to cope with human emotions ranked one and two respectively among chief executive officers. In contrast, educators rated development of verbal and written communication skills and the development of problem-solving skills one and two respectively whereas the first and second ranking by chief personnel officers was development of communication skills and the ability to cope with human emotions. These studies do imply that technical, human, and conceptual skills are deemed necessary by educators and industry executives.

V. THE NEED FOR REVISING CURRICULUMS

It was reported earlier by Powers (1980) that two-year and four-year college programs emphasize technical skill development in their curriculums. Investigations by Matthews et al. (1975), Lukowski et al. (1974), and Koppel (1978) revealed a number of areas which industry executives and educators felt were important in the development of potential foodservice administrators such as developing communication skills, problem-solving skills, and dealing with human emotions.

In order to better understand the need to revise current curriculums, it is necessary to look at past trends in the foodservice industry. The four general foodservice systems reported by Rappole (1974) were conventional, semi-conventional, ready foods, and total convenience.

The conventional system is the traditional foodservice operation where raw food items are purchased and prepared on-the-premises just prior to serving. In a semi-conventional operation some foods are purchased raw but require little preparation prior to production. Examples of this would be frozen vegetables and desserts and pre-cut meats. The ready foods system prepares food on-premise then freezes the food for future use. The total convenience system purchases 95-100% of all foods in

preserved form in various stages of readiness (Rappole, 1974).

Food cooking courses are still the emphasis in many foodservice curriculums rather than food systems and management courses. Furthermore many college programs neglect the important areas of new food technology and the impact on management such as new methods of preservation, new types of specifications, and computer technology. Industry, over the years, has gradually progressed from total conventional systems, to semi-conventional, ready foods, and total convenience systems. Courses in the newer systems have sometimes been offered as electives at best and not at all at worst (Rappole, 1974).

In an effort to prepare the student for systems of the future, food curriculums should be designed to reflect future industry needs as well as today's need. Rappole (1974) suggested a four-year basic food curriculum plan emphasizing semi-conventional, ready foods, and convenience systems.

During the freshman year sanitation and purchasing and receiving should be emphasized. Hazards exist in the newer systems which are quite different from conventional systems. Purchasing and receiving should be stressed with emphasis on specifications, specification writing, and checking of specifications. The sophomore year would emphasize organic chemistry and food production in a

commercial operation. The junior year would allow the student to manage a foodservice unit such as a cafeteria on campus. This would permit the student to integrate technical knowledge into an actual management situation. The senior year would allow the student to oversee the total food and beverage operation of a foodservice facility (Rappole, 1974).

CHAPTER III

PROCEDURE

The role of a foodservice administrator is varied and complex and in order to succeed as an administrator, one must possess particular administrative skills as described by Katz (1955) as technical, human, and conceptual. The purpose of this research was to investigate the need for administrative skills in the foodservice industry and the role of baccalaureate degree programs in developing these skills for potential foodservice administrators.

I. INSTRUMENT AND QUESTIONNAIRE

Courses which emphasize technical, human, and conceptual skill development were identified (Appendix Table A-1), and used in the development of a Semantic Differential scale. The Semantic Differential scale developed for this research (Appendix A) was used to compare the attitude of educators and foodservice industry executives toward technical, human, and conceptual skill development. Kerlinger (1964, p. 564) defined the Semantic Differential as "a method of observing and measuring the psychological meaning of things, usually concepts." The purpose of the scale is to measure the meaning of specific concepts by various people by having them judge the concept against a series of descriptive

scales (Osgood et al., 1957). A sample of a Semantic Differential scale is illustrated below:

Personnel Management

Good _(7)_ : _(6)_ : _(5)_ : _(4)_ : _(3)_ : _(2)_ : _(1)_ Bad

In the above illustration, personnel management represents the concept to be judged and good and bad represent the bi-polar adjectives or scales used in judging the concept. The numbers in parenthesis represent the value, which is decided rather arbitrarily, of each space along the scale. The subjects are instructed to place an "X" in a space on the scale which best describes their intensity of feeling toward the concept. For example if a subject feels that the concept at the top of the scale is very closely related to one end of the scale, an "X" would be placed as follows:

Personnel Management

Good __X__ : _____ : _____ : _____ : _____ : _____ : _____ Bad

or

Personnel Management

Good _____ : _____ : _____ : _____ : _____ : _____ : __X__ Bad

The intensity of feeling can be represented in any space along the scale with the center position, coded 4 in this example, representing neutrality (Osgood et al., 1957).

In assessing baccalaureate degree programs in meeting industry needs for technical, human, and conceptual skill development, a modified Likert scale was developed (Appendix A). In an attempt to strengthen the reliability of the scale, seven response alternatives were selected as opposed to the typical five response alternative format (Anderson, 1981). The response alternatives selected were strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, and strongly disagree.

Each respondent selects one response alternative to each item on the scale. A respondent's score is obtained by summing the numerical value assigned to each response option and then totaling the numerical values. An example of a modified Likert scale is illustrated below. The numerical value for each response option is shown in parenthesis.

English literature is intellectually stimulating.

1. __(7)__ Strongly agree
2. __(6)__ Agree
3. __(5)__ Somewhat agree
4. __(4)__ Neither agree nor disagree (neutrality)
5. __(3)__ Somewhat disagree
6. __(2)__ Disagree
7. __(1)__ Strongly disagree

Depending upon which alternative is selected, responses can be made in terms of direction, positive or negative, and intensity, strongly or slightly (Anderson, 1981).

Both the Semantic Differential scale and the Likert scale have been widely used in measuring attitude (Parten, 1950; Osgood et al., 1957; Snider and Osgood, 1969; Lukowski et al., 1974; Anderson, 1981). In addition to these scales a general information questionnaire was developed for gathering profile data (Appendix A).

After field testing the scales by the Chairperson, Department of Nutrition and Food Science at The University of Tennessee, Knoxville and by the Chief Executive Officer at the Hyatt Regency Hotel, Knoxville, Tennessee the scales were revised as necessary. The names of the scales were changed from Semantic Differential scale to attitude scale and from Likert scale to questionnaire to simplify the terminology.

II. SELECTION OF SUBJECTS

A random sample of 25 colleges and universities, from a population of 73, offering a baccalaureate degree in foodservice administration (foodservice management) as listed in Peterson's Annual Guide to Undergraduate Study for 1982 and a random sample of 100 commercial foodservice firms selected from Restaurants and Institutions 400 for 1981 was used in this research. The attitude scales and profile questionnaire were mailed to department heads at educational institutions and to vice-presidents of operations or equivalent for foodservice organizations.

As scales and questionnaires were returned, numbers were assigned to the participants for comparison purposes and to assure anonymity.

A cover letter to each participant accompanied each scale and questionnaire (Appendix B) explaining the nature of the research. A stamped, self-addressed return envelope was also provided. A follow-up post card (Appendix B) was sent to each participant as a reminder three days following the initial mailing.

III. ANALYSIS OF DATA

Under the assumption that the level of measurement in the Semantic Differential scale was interval data, a two-way ANOVA for independent samples was conducted. Messick (1957) found that violation of the assumption of interval data is not serious enough to interfere with many applications of the Semantic Differential. The null hypothesis that no difference exists between the attitude of educators and industry executives toward technical, human, and conceptual skill development was tested. A *t* test analysis for independent samples and correlated samples was conducted in order to isolate where differences in attitude exists.

The concepts on the Semantic Differential scale were ranked by mean score within their appropriate skill level for each group of respondents. Thus the degree of

importance which educators and industry executives placed on courses within each skill level was indicated. An overall ranking by mean scores without regard to skill was tabulated to determine if one group scored concepts higher or lower than the other.

The percentage of response was computed in terms of direction and intensity on each question or statement on the Likert scale. Intensity indicates how strongly or slightly one feels toward the positive or negative aspects of the question or statements.

When the two groups of respondents disagreed in terms of positive or negative aspects, those statements were treated by t test analysis for independent samples. The null hypothesis that no difference in attitude exists between educators and industry executives that baccalaureate degree programs in foodservice administration are meeting industry needs for technical, human, and conceptual skill development was assumed.

CHAPTER IV

RESULTS AND DISCUSSION

The purpose of this research was to investigate the need for administrative skills in the foodservice industry and the role of baccalaureate degree programs in developing these skills for potential foodservice administrators. In order to obtain background information on the participants in this research, a profile data sheet was utilized (Appendix A). The primary purpose of the profile data was to gain information on the participants' employment and education.

To compare the attitude of educators and foodservice industry executives toward administrative skill development, a Semantic Differential scale was utilized (Appendix A). A modified Likert scale (Appendix A) was developed to assess four-year baccalaureate degree programs in foodservice administration in meeting industry needs for administrative skill development.

Of the 25 colleges and universities and 100 commercial foodservice firms used in the research, 15 educators (60%) and 34 industry executives (34%) responded. All of the respondents answered the profile data, attitude scale (Semantic Differential scale) and the Questionnaire (Likert scale) in their entirety.

I. PROFILE DATA

Educators

The typical educator responding to the survey has been employed by their present employer less than five years (40%), was between 45-54 years of age (47%), and had a yearly income from their primary employer between $20,000 and $29,000 (53%). Most of the educators (47%) majored in Hotel and Restaurant Management and graduated with a baccalaureate degree between 1950-1959 (40%). The majority of the educators (80%) held a post graduate degree (Appendix Table C-1).

Industry Executives

The typical industry executive was employed by their present employer 6-10 years (32%), was between 35-44 years old (59%), and had a yearly income from their primary employer of over $60,000 (35%). Just over 32% majored in business administration with 41% majoring in a field other than a foodservice related field, business administration, or education. Most of the industry executives graduated between 1960-1969 (41%) with 44% having a baccalaureate degree (Appendix Table C-1).

General Comments

The profile data questionnaire provided an opportunity for the respondents to make comments pertaining to

this study. A representative sample of comments from industry executives is shown in Appendix D. There were no relevant comments from educators.

II. SEMANTIC DIFFERENTIAL (ATTITUDE SCALE)

A Semantic Differential scale was utilized to measure the attitude between educators and foodservice industry executives toward technical, human, and conceptual skill development in colleges and universities offering a baccalaureate degree in foodservice administration. Courses or concepts were arbitrarily selected, by definition, to represent each of these skill areas (Appendix Table A-1).

The purpose of the Semantic Differential scale was to measure the meaning of specific concepts by various people by having them judge the concept against a series of descriptive scales (Osgood et al., 1957). The scale measures both intensity of feeling and directionality. The score for each scale is obtained by summing the value of each response on each scale. Each scale had a maximum value of seven and a minimum value of one. Therefore, a maximum score of twenty-one and a minimum score of three was possible for each concept. An example of three of the Semantic Differential scales for each concept used in this study follows:

Good	(7): (6): (5): (4): (3): (2): (1)	Bad
Unimportant	(1): (2): (3): (4): (5): (6): (7)	Important
Needed	(7): (6): (5): (4): (3): (2): (1)	Unneeded

Therefore, a response of seven or one represents extremely positive or negative, six or two represents very positive or negative, five or three represents slightly positive or negative. A response of four represents neutrality.

Total scores were obtained by summing each concept score for each respondent. To determine whether or not a significant difference in attitude existed between educators and industry executives a two-way analysis of variance of mean scores was computed. Mean scores computed from the Semantic Differential scale for educators and industry executives are listed in Appendix Table C-2. To test for significance of difference, the null hypothesis that no difference exists between the attitude of educators and industry executives toward the three administrative skills was assumed. Because of unequal cell sizes, a random sample of fifteen industry executives was taken and used in computing the two-way ANOVA.

When the mean scores of educators and industry executives were analyzed by a two-way analysis of variance, the results showed a significant difference among the mean scores for technical, human, and conceptual skills and a significant difference between the mean scores for educators and industry executives in their attitude toward

these skills (Appendix Table C-3). An F ratio of 3.96 for 1 and 80 degrees of freedom and an F ratio of 3.11 for 2 and 80 degrees of freedom is required for significance at the .05 level. This study found an F ratio of 10.15 for 1 and 89 degrees of freedom and 5.53 for 2 and 89 degrees of freedom at the .05 level. Since this study was not concerned with the absolute magnitude of the difference, a one-tailed test was utilized. The null hypothesis of no difference between the attitude of educators and industry executives toward the three administrative skills was rejected.

In order to determine where attitudes differed between educators and industry executives and which skills differentiated the groups, t test analysis for independent samples (Appendix Table C-4) and for correlated samples utilizing a one-tailed test (Appendix Table C-5) was conducted. Three hypotheses were assumed in the analysis for independent samples.

1. There is no difference between the attitudes of educators and industry executives toward technical skills.
2. There is no difference between the attitudes of educators and industry executives toward human skills.

3. There is no difference between the attitude of educators and industry executives toward conceptual skills.

Six hypotheses were assumed in the analysis for correlated samples.

1. There is no difference in the attitude of educators between technical and human skills.
2. There is no difference in the attitude of educators between technical and conceptual skills.
3. There is no difference in the attitude of educators between human and conceptual skills.
4. There is no difference in the attitude of industry executives between technical and human skills.
5. There is no difference in the attitude of industry executives between technical and conceptual skills.
6. There is no difference in the attitude of industry executives between human and conceptual skills.

Independent Samples of Educators And Industry Executives

The critical value of *t* for 40 degrees of freedom at the .05 level is 1.68. Appendix Table C-4 reveals that *t* test analysis yields a *t* value of 12.4 for technical skills, .91 for human skills, and 1.68 for conceptual

skills for 47 degrees of freedom. Therefore, the null hypothesis that there is no difference between the attitudes of educators and industry executives toward technical skills was rejected at the .05 level. The null hypothesis that there is no difference between the attitude of educators and industry executives toward conceptual skills was rejected at the .05 level.

Correlated Samples of Educators

The critical value of t for 14 degrees of freedom at the .05 level is 1.76 and for 14 degrees of freedom at the .10 level the critical value of t is 1.345. Appendix Table C-5 shows that t values calculated for educators toward technical versus human skills, technical versus conceptual skills, and human versus conceptual skills were 2.63, 4.08 and 1.63 respectively for 14 degrees of freedom. Therefore the null hypotheses that there is no difference in the attitude of educators between technical and human skills and between technical and conceptual skills was rejected at the .05 level. The null hypothesis that there is no difference in the attitude of educators between human and conceptual skills was rejected at the .10 level.

Correlated Samples of Industry Executives

In contrast, the critical value of t for 30 degrees of freedom at the .05 level is 1.697. Appendix Table C-5

indicates that the calculated t value for industry executives toward technical versus human skills, technical versus conceptual skills, and human versus conceptual skills were .027, 4.06, and 5.0 respectively. Therefore, the null hypotheses that there is no difference in the attitude of industry executives between technical and conceptual skills and between human and conceptual skills was rejected at the .05 level.

Mean scores were computed for each concept on the Semantic Differential scale for educators and industry executives (Appendix Table C-2). The concepts were ranked by mean score within their appropriate skill level (Appendix Table C-6) and by mean scores without regard to skill levels (Appendix Table C-7). This gave an indication of the degree of importance which educators and industry executives placed on courses within each skill level.

III. LIKERT SCALE (QUESTIONNAIRE)

A modified Likert scale was developed to assess four-year baccalaureate degree programs in foodservice administration in meeting industry needs for technical, human, and conceptual skills. The purpose of this scale is to measure responses in terms of direction, positive or negative, and intensity, strongly or slightly. Seven response alternatives were selected as opposed to the

typical five in an attempt to strengthen the reliability of the scale (Anderson, 1981). An example of a modified Likert scale is illustrated below.

Examinations are an accurate measurement of one's knowledge.

1. (7) Strongly agree
2. (6) Agree
3. (5) Somewhat agree
4. (4) Neither agree nor disagree (Neutrality)
5. (3) Somewhat disagree
6. (2) Disagree
7. (1) Strongly disagree

Each respondent selects one response alternative to each question or statement on the scale. The numerical value for each response option is shown in parenthesis. Scores are obtained by summing the numerical value assigned to each response option and then totaling the numerical values. Depending upon which alternative is selected, responses can be made in terms of direction, positive or negative, and in terms of intensity, strongly or slightly (Anderson, 1981). Response alternatives 1-3 represent a positive feeling toward the statement, 4 represents neutrality, and 5-7 represent a negative feeling toward the statement.

Appendix Table C-8 indicates the percentage of response in terms of direction while Appendix Table C-9 indicates intensity. Intensity is a refinement of how strongly or slightly one feels toward the positive or negative aspects of the question or statement. Therefore,

the sum of the percentages of response for intensity will equal the percentage of response for direction.

Examination of Appendix Table C-8 reveals that 80% of the educators and 73.5% of the industry executives felt there is indeed a communication gap between educators and the foodservice industry. Nevertheless, 60% of the educators and 73.5% of the industry executives felt colleges and universities should place more emphasis on human and conceptual skill development rather than technical skill development. This is further supported by the fact that 60% of the educators and 64.7% of the industry executives felt the foodservice industry is better able to teach technical skills than are educational institutions and that educational institutions should place more emphasis on management courses i.e., human and conceptual skills. Approximately 73% of the educators and 64.7% of the industry executives indicated a positive response toward this statement.

Furthermore, 87.7% of the educators and 85.3% of the industry executives felt that human and conceptual skills enable students to think like managers and conceptual skills are consequently more important than technical skills as managers progress up the managerial hierarchy. This was emphasized by 93.3% of the educators and 88.2% of the industry executives indicating a positive response. Both groups were almost in total agreement (100% of the

educators and 97.1% of the industry executives) that work-experience programs are vital in preparing students for foodservice managerial positions.

There was not always agreement between the two groups of respondents. In contrast, 79.4% of the industry executives felt that most graduates are better prepared as technicians rather than as managers whereas 46.7% of the educators felt this was true. Furthermore 80% of the educators, as opposed to only 38.2% of the industry executives, felt that educational institutions are preparing students for managerial positions in the foodservice industry. Consequently 60% of the educators felt that academic institutions are meeting industry's needs in preparing students for foodservice management positions whereas only 38.2% of the industry executives felt this was true.

Analysis of the results in Appendix Table C-8 indicates the two groups of respondents disagreed in terms of positive or negative aspects on statements 2, 3, and 10 on the questionnaire. To determine whether or not there was any significant difference between the responses of the two groups, t test analysis for independent samples was computed on each statement. The null hypothesis that no difference in attitude exists between educators and industry executives toward each statement on the questionnaire was assumed.

Appendix Table C-10 shows that at the .05 level for 40 degrees of freedom a t value of 1.68 is required for significance. Further examination of Appendix Table C-10 reveals that the calculated t value for statements 2, 3, and 10 was 2.73, 3.5, and 1.87 respectively at the .05 level for 47 degrees of freedom. Utilizing a one-tailed test, the null hypothesis that no difference in attitude exists between educators and industry executives was rejected on statements 2, 3, and 10.

CHAPTER V

CONCLUSIONS, RECOMMENDATIONS, AND SUMMARY

I. CONCLUSIONS

This study investigated the need for technical, human, and conceptual skills in the foodservice industry and the role of baccalaureate degree programs in developing these skills for potential foodservice administrators. The findings of this study indicated that educators and industry executives have different attitudes toward these skills.

The two groups were in apparent agreement toward human skills but were significantly different in their attitude toward technical and conceptual skills (Appendix Table C-4). However, since unique courses related to a specific skill (Appendix A), the difference in attitude between the two groups toward technical and conceptual skills may only be a matter of the degree of intensity i.e., educators had a tendency to score courses, therefore administrative skills, higher than the industry executives (Appendix Table C-6).

Furthermore, there appears to be differences in attitude within the two respective groups toward the three administrative skills (Appendix Table C-5). This may also be a matter of intensity of feeling toward specific courses rather than toward administrative skills.

Both groups felt that human and conceptual skills were more important to foodservice administrators than were technical skills. This does not necessarily mean that technical skill development courses should be discarded but rather de-emphasized in academic curricula (Appendix Table C-8).

Since educators and industry executives felt human and conceptual skills better prepare students for managerial positions than do technical skills, it is interesting to note how the two groups perceive the graduate. Eighty percent of the educators felt that baccalaureate degree programs do indeed prepare students for managerial positions. Conversely, 79% of the industry executives felt college graduates were better prepared as technicians (Appendix Tables C-8 and C-10).

The two groups obviously view the graduate differently. Educators felt that academic institutions are preparing students for managerial positions and are therefore meeting the needs of the industry. Industry executives did not agree with educators' opinion on this matter thus baccalaureate degree programs are not, according to industry executives, meeting the needs of the industry for technical, human, and conceptual skill development for potential foodservice administrators (Appendix Tables C-8 and C-10).

By their own admission, both groups felt a communication gap exists between educators and the foodservice industry (Appendix Table C-8). This may be the single most critical factor attributing to the differences between the two groups. Whether the differences between the two groups are real or perceived, they are indeed problems.

It is concluded that there is a difference in attitude between educators and the foodservice industry toward technical and conceptual skill development. Also, the foodservice industry does not feel that baccalaureate degree programs are meeting their needs toward these skills.

II. RECOMMENDATIONS

The findings in this study reveal that educators and foodservice industry executives have different attitudes toward technical and conceptual skill development. In addition, the foodservice industry feels that academic institutions are not developing graduates in meeting their needs toward the administrative skills. The difference in attitude between the two groups may be attributed to a matter of definition, perception, or both. One thing stands clear and that is the communication gap that lies between educators and the foodservice industry.

Courses which emphasize technical, human, and conceptual skills need to be identified. It is apparent that educators desire to produce students from their institutions for managerial positions in the foodservice industry. Likewise, industry executives desire such graduates.

If, in fact, the foodservice industry is seeking graduates who possess human and conceptual skills as well as technical skills, then four-year academic institutions should assess their curriculums in respect to these skills. Educators must evaluate their programs in relation to which skills are being emphasized. According to this study, if more emphasis is on technical, rather than human and conceptual skills, then revision to the curriculum is probably in order. Likewise, foodservice executives must review their needs to identify the type of skills the industry requires.

It should be the responsibility of academic institutions to attempt to produce graduates that possess the skills needed by the foodservice industry. In order for this to occur, the foodservice industry must make their needs known to academic institutions. Of course, it must be understood that curriculums are often influenced by the philosophy, goals, and objectives of the college or university as well as the knowledge and expertise of the faculty.

To help bridge the communication gap between educators and the foodservice industry, organizations such as the Council on Hotel, Restaurant, and Institutional Education and the National Restaurant Association should play a vital role. Such organizations should include in their agenda topics which address concerns revealed by this study.

Further research of this type is recommended to better define administrative skills and to identify courses which emphasize technical, human, and conceptual skills. A coalition between educators and foodservice industry executives is highly recommended to improve communications and to identify needs, concerns, and limitations of both groups. It is suggested that research be conducted to determine ways to bridge the communication gap between educators and industry executives in order to overcome some of the issues raised by this study.

III. SUMMARY

A survey was conducted to investigate the need for technical, human, and conceptual skills in the foodservice industry and to investigate the role of baccalaureate degree programs in developing these skills for potential foodservice administrators. A Semantic Differential scale was developed to compare the attitudes of educators and

foodservice industry executives toward these administrative skills. A modified Likert scale was also developed to assess baccalaureate degree programs in meeting industry needs for administrative skills.

Fifteen educators and thirty-four industry executives responded to the survey. A profile sheet was included with the scales. All of the respondents answered the scales and profile data in their entirety.

When the mean scores of educators and industry executives from the Semantic Differential scale were analyzed by a two-way analysis of variance, the results showed a significant difference between the attitude of educators and industry executives toward technical, human, and conceptual skills. An F ratio of 3.96 for 1 and 80 degrees of freedom was required for significance at the .05 level. The results of this study found an F ratio of 10.15 for 1 and 89 degrees of freedom and 5.53 for 2 and 89 degrees of freedom at the .05 level therefore the null hypothesis was rejected.

Analysis of the Likert scale revealed that both groups felt that human and conceptual skills are more important to foodservice administrators than are technical skills. Educators felt that baccalaureate degree programs prepared students for managerial positions in the foodservice industry. However, industry executives felt college graduates were better prepared as technicians.

Furthermore, educators felt that academic institutions were meeting the needs of the industry. Industry executives did not agree with educators on this matter and felt that baccalaureate degree programs were not preparing students to meet the needs of the foodservice industry.

Although the two groups appear to have different attitudes and opinions toward administrative skills, these differences may be partially a matter of intensity of feeling toward these skills. In addition, the differences may also be due to the groups' definition of administrative skills, a matter of their perception toward graduates, or both.

The findings of this study revealed that there may be a need for academic institutions to evaluate their curriculums in terms of administrative skill development. Additionally, and perhaps more importantly, the two groups must develop much stronger lines of communication.

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APPENDICES

APPENDIX A

Table A-1

Courses Which Emphasize Technical, Human, and Conceptual Skill Development

Technical	Human	Conceptual
Accounting Principles	Sociology	Psychology of Business
Quantity Food Purchasing	Human Motivation	Philosophy
Quantity Food Production	Counseling Theory	Contract Negotiations
Sanitation	Leadership Theory	Marketing
Food Production Management	Human Resource Management	Data Analysis
Convenience Food Production	Organization Behavior	Psychology of Advertising
Report Writing	Business Law	Salesmanship
Nutrition	Human Nature	Systems Management
Equipment Design	Management/Union Relations	Financial Analysis
Layout and Design	Communications	Risk Management

Sample Attitude Scale (Semantic Differential)

DIRECTIONS FOR ATTITUDE SCALE

The purpose of this scale is to assess attitudes of educators and foodservice industry executives toward courses or concepts relating to curriculum development of baccalaureate degree programs in foodservice administration. Since different people have different attitudes toward a course or concept, please respond on the basis of how you feel now.

At the top of each scale is the course or concept to be assessed. At the extreme ends of each scale are adjectives used in judging the course or concept.

Here is how you use the scale:

If you believe that the course or concept at the top of the scale is very closely related to one end of the scale you should place a check mark as follows:

ENGLISH

Good __X__ : ____ : ____ : ____ : ____ : ____ : ____ Bad

or

Good ____ : ____ : ____ : ____ : ____ : ____ : __X__ Bad

If you feel that the course or concept is quite closely related to one end but not extremely you should place your check mark as follows:

Good ____: __X__: ____: ____: ____: ____: ____ Bad

or

Good ____: ____: ____: ____: ____: __X__: ____ Bad

If you feel that the course or concept is only slightly related to one end but not neutral, then place your mark as follows:

Good ____: ____: __X__: ____: ____: ____: ____ Bad

or

Good ____: ____: ____: ____: __X__: ____: ____ Bad

If you feel the course or content is neutral, that is, equally associated with both ends of the scale, or that the course or concept is completely irrelevant, then place your mark in the middle space:

Good ____: ____: ____: __X__: ____: ____: ____ Bad

There are three simple rules to remember:

1. Place your check mark in the middle of the space, not on the boundaries.

this not this
____: __X__: ____: ____: ____X____: ____

2. Check every scale; do not omit any.

3. No more than one check mark per scale.

There are no courses or concepts repeated on the scale so please judge each course or concept independently. We are interested in your first impression so please work quickly but not carelessly.

Remember, we are interested in how you judge each course or concept in relation to developing courses appropriate for baccalaureate degree programs in food-service administration.

ATTITUDE SCALE

Accounting Principles

Good ____: ____: ____: ____: ____: ____: ____ Bad

Unimportant ____: ____: ____: ____: ____: ____: ____ Important

Needed ____: ____: ____: ____: ____: ____: ____ Unneeded

Quantity Food Purchasing

Good ____: ____: ____: ____: ____: ____: ____ Bad

Needed ____: ____: ____: ____: ____: ____: ____ Unneeded

Important ____: ____: ____: ____: ____: ____: ____ Unimportant

Sociology

Unneeded ____: ____: ____: ____: ____: ____: ____ Needed

Bad ____: ____: ____: ____: ____: ____: ____ Good

Unimportant ____: ____: ____: ____: ____: ____: ____ Important

Psychology in Business

Bad ____: ____: ____: ____: ____: ____: ____ Good

Unimportant ____: ____: ____: ____: ____: ____: ____ Important

Needed ____: ____: ____: ____: ____: ____: ____ Unneeded

Philosophy

Needed ____: ____: ____: ____: ____: ____: ____ Unneeded

Good ____: ____: ____: ____: ____: ____: ____ Bad

Unimportant ____: ____: ____: ____: ____: ____: ____ Important

Human Motivation

Unimportant ____: ____: ____: ____: ____: ____: ____ Important

Unneeded ____: ____: ____: ____: ____: ____: ____ Needed

Bad ____: ____: ____: ____: ____: ____: ____ Good

Quantity Food Production

Good ____: ____: ____: ____: ____: ____: ____ Bad

Unimportant ____: ____: ____: ____: ____: ____: ____ Important

Needed ____: ____: ____: ____: ____: ____: ____ Unneeded

Contract Negotiations

Bad ____: ____: ____: ____: ____: ____: ____ Good

Important ____: ____: ____: ____: ____: ____: ____ Unimportant

Unneeded ____: ____: ____: ____: ____: ____: ____ Needed

Counseling Theory

Unimportant ____: ____: ____: ____: ____: ____: ____ Important

Good ____: ____: ____: ____: ____: ____: ____ Bad

Needed ____: ____: ____: ____: ____: ____: ____ Unneeded

Marketing

Unimportant ____: ____: ____: ____: ____: ____: ____ Important

Good ____: ____: ____: ____: ____: ____: ____ Bad

Unneeded ____: ____: ____: ____: ____: ____: ____ Needed

Sanitation

Bad ____: ____: ____: ____: ____: ____: ____ Good

Important ____: ____: ____: ____: ____: ____: ____ Unimportant

Needed ____: ____: ____: ____: ____: ____: ____ Unneeded

Leadership Theory

Good ____: ____: ____: ____: ____: ____: ____ Bad

Important ____: ____: ____: ____: ____: ____: ____ Unimportant

Needed ____: ____: ____: ____: ____: ____: ____ Unneeded

Data Analysis

Important ____: ____: ____: ____: ____: ____: ____ Unimportant

Bad ____: ____: ____: ____: ____: ____: ____ Good

Needed ____: ____: ____: ____: ____: ____: ____ Unneeded

Psychology of Advertising

Needed ____: ____: ____: ____: ____: ____: ____ Unneeded

Good ____: ____: ____: ____: ____: ____: ____ Bad

Important ____: ____: ____: ____: ____: ____: ____ Unimportant

Human Resource Management

Good ____: ____: ____: ____: ____: ____: ____ Bad

Unimportant ____: ____: ____: ____: ____: ____: ____ Important

Unneeded ____: ____: ____: ____: ____: ____: ____ Needed

Food Production Management

Needed ____: ____: ____: ____: ____: ____: ____ Unneeded

Important ____: ____: ____: ____: ____: ____: ____ Unimportant

Good ____: ____: ____: ____: ____: ____: ____ Bad

Convenience Food Production

Bad ____: ____: ____: ____: ____: ____: ____ Good

Unimportant ____: ____: ____: ____: ____: ____: ____ Important

Unneeded ____: ____: ____: ____: ____: ____: ____ Needed

Report Writing

Unimportant ____: ____: ____: ____: ____: ____: ____ Important

Good ____: ____: ____: ____: ____: ____: ____ Bad

Needed ____: ____: ____: ____: ____: ____: ____ Unneeded

Equipment Design

Good ____: ____: ____: ____: ____: ____: ____ Bad

Unneeded ____: ____: ____: ____: ____: ____: ____ Needed

Unimportant ____: ____: ____: ____: ____: ____: ____ Important

Financial Analysis

Important ____: ____: ____: ____: ____: ____: ____ Unimportant

Good ____: ____: ____: ____: ____: ____: ____ Bad

Needed ____: ____: ____: ____: ____: ____: ____ Unneeded

Management/Union Relations

Unneeded ____: ____: ____: ____: ____: ____: ____ Needed

Unimportant ____: ____: ____: ____: ____: ____: ____ Important

Bad ____: ____: ____: ____: ____: ____: ____ Good

Layout and Design

Needed ____: ____: ____: ____: ____: ____: ____ Unneeded

Bad ____: ____: ____: ____: ____: ____: ____ Good

Unimportant ____: ____: ____: ____: ____: ____: ____ Important

Principles of Risk Management

Good ____: ____: ____: ____: ____: ____: ____ Bad

Important ____: ____: ____: ____: ____: ____: ____ Unimportant

Needed ____: ____: ____: ____: ____: ____: ____ Unneeded

Communication Skills

Unimportant ____: ____: ____: ____: ____: ____: ____ Important

Needed ____: ____: ____: ____: ____: ____: ____ Unneeded

Bad ____: ____: ____: ____: ____: ____: ____ Good

Salesmanship

Important ____: ____: ____: ____: ____: ____: ____ Unimportant

Needed ____: ____: ____: ____: ____: ____: ____ Unneeded

Good ____: ____: ____: ____: ____: ____: ____ Bad

Organization Behavior

Bad ____: ____: ____: ____: ____: ____: ____ Good

Important ____: ____: ____: ____: ____: ____: ____ Unimportant

Needed ____: ____: ____: ____: ____: ____: ____ Unneeded

Business Law

Important ____: ____: ____: ____: ____: ____: ____ Unimportant

Unneeded ____: ____: ____: ____: ____: ____: ____ Needed

Good ____: ____: ____: ____: ____: ____: ____ Bad

Systems Management

Important ____: ____: ____: ____: ____: ____: ____ Unimportant

Needed ____: ____: ____: ____: ____: ____: ____ Unneeded

Good ____: ____: ____: ____: ____: ____: ____ Bad

Human Nature

Unimportant ____: ____: ____: ____: ____: ____: ____ Important

Bad ____: ____: ____: ____: ____: ____: ____ Good

Needed ____: ____: ____: ____: ____: ____: ____ Unneeded

Nutrition

Bad ____: ____: ____: ____: ____: ____: ____ Good

Needed ____: ____: ____: ____: ____: ____: ____ Unneeded

Unimportant ____: ____: ____: ____: ____: ____: ____ Important

Sample Questionnaire (Likert Scale)

DIRECTIONS FOR QUESTIONNAIRE

This is not a test. There are no "right" or "wrong" responses to any of the sentences. Just answer as honestly as you can.

Please indicate how you feel about each statement by placing an "X" on the space provided which best represents your feeling.

Here is an example:

School is intellectually demanding.

1. ____ Strongly agree
2. ____ Agree
3. ____ Somewhat agree
4. ____ Neither agree nor disagree
5. ____ Somewhat disagree
6. ____ Disagree
7. ____ Strongly disagree

Which of the seven ways tells how you feel about the sentence? Please respond to each question and place an "X" by only one response to each.

QUESTIONNAIRE

1. It has been suggested that a communication gap exists between educators and the foodservice industry. How do you feel about this statement?

   1 ____ Strongly agree
   2 ____ Agree
   3 ____ Somewhat agree
   4 ____ Neither agree nor disagree
   5 ____ Somewhat disagree
   6 ____ Disagree
   7 ____ Strongly disagree

2. Most college graduates in foodservice management are better prepared as technicians rather than as managers.

   1 ____ Strongly agree
   2 ____ Agree
   3 ____ Somewhat agree
   4 ____ Neither agree nor disagree
   5 ____ Somewhat disagree
   6 ____ Disagree
   7 ____ Strongly disagree

3. Most baccalaureate degree programs in foodservice management prepare students for managerial positions in the foodservice industry.

   1 ____ Strongly agree
   2 ____ Agree
   3 ____ Somewhat agree
   4 ____ Neither agree nor disagree
   5 ____ Somewhat disagree
   6 ____ Disagree
   7 ____ Strongly disagree

4. Work-experience programs are vital in preparing students for foodservice managerial positions.

   1 ____ Strongly agree
   2 ____ Agree
   3 ____ Somewhat agree
   4 ____ Neither agree nor disagree
   5 ____ Somewhat disagree
   6 ____ Disagree
   7 ____ Strongly disagree

5. Human skills emphasize human relations and conceptual skills emphasize creativity. More emphasis should be placed on human and conceptual skill development in baccalaureate degree programs rather than technical skill development.

1 ____ Strongly agree
2 ____ Agree
3 ____ Somewhat agree
4 ____ Neither agree nor disagree
5 ____ Somewhat disagree
6 ____ Disagree
7 ____ Strongly disagree

6. As managers progress up the managerial hierarchy, conceptual skills become more important than technical skills.

1 ____ Strongly agree
2 ____ Agree
3 ____ Somewhat agree
4 ____ Neither agree nor disagree
5 ____ Somewhat disagree
6 ____ Disagree
7 ____ Strongly disagree

7. The foodservice industry is better able to teach technical skills than are educational institutions.

1 ____ Strongly agree
2 ____ Agree
3 ____ Somewhat agree
4 ____ Neither agree nor disagree
5 ____ Somewhat disagree
6 ____ Disagree
7 ____ Strongly disagree

8. Educational institutions should place more emphasis on quantity food production courses rather than management courses.

1 ____ Strongly agree
2 ____ Agree
3 ____ Somewhat agree
4 ____ Neither agree nor disagree
5 ____ Somewhat disagree
6 ____ Disagree
7 ____ Strongly disagree

9. Human and conceptual skills enable students to think like managers.

1 ____ Strongly agree
2 ____ Agree
3 ____ Somewhat agree
4 ____ Neither agree nor disagree
5 ____ Somewhat disagree
6 ____ Disagree
7 ____ Strongly disagree

10. Academic institutions are meeting the needs of industry in preparing students for foodservice management positions.

1 ____ Strongly agree
2 ____ Agree
3 ____ Somewhat agree
4 ____ Neither agree nor disagree
5 ____ Somewhat disagree
6 ____ Disagree
7 ____ Strongly disagree

Sample General Information Questionnaire

PROFILE DATA

In order to provide profile data please complete the following information by checking the appropriate response to each of the following:

1. I am presently employed:

   1 ____ By a college or university
   2 ____ In the foodservice industry

2. My present position title is _____.

3. I have been with my present employer for:

   1 ____ Less than five years
   2 ____ 6 - 10 years
   3 ____ 11 - 15 years
   4 ____ 16 - 20 years
   5 ____ Over 20 years

4. My highest level of education is:

   1 ____ Did not graduate from high school
   2 ____ High school graduate
   3 ____ Some college, did not graduate
   4 ____ Associate degree
   5 ____ Baccalaureate degree
   6 ____ Post graduate degree

5. I graduated from college (Baccalaureate or Associate degree):

   1 ____ Before 1950
   2 ____ 1950 - 1959
   3 ____ 1960 - 1969
   4 ____ 1979 - 1979
   5 ____ 1980 or later
   6 ____ Did not graduate

6. My age is:

1 ____ Under 24 years old
2 ____ 25 - 34 years old
3 ____ 35 - 44 years old
4 ____ 45 - 54 years old
5 ____ 55 - 64 years old
6 ____ Over 64 years old

7. My yearly income from my primary employer is:

1 ____ Less than $20,000
2 ____ $20,000 - $29,999
3 ____ $30,000 - $39,999
4 ____ $40,000 - $49,999
5 ____ $50,000 - $59,999
6 ____ $60,000 or over

8. My major while in college was:

1 ____ Hotel and Restaurant Management
2 ____ Institution Management
3 ____ Foodservice Management
4 ____ Business Administration
5 ____ Education
6 ____ Other_____
(Please indicate)

9. If you would like a summary of the results of this study please indicate yes by providing a mailing address below:

10. If you would like to make any comments pertaining to this study please feel free to do so.

APPENDIX B

Sample Cover Letter

We would like to solicit your assistance in evaluating skill development of potential foodservice administrators in baccalaureate degree programs in colleges and universities.

In an effort to determine the effectiveness of curricula we are conducting a nationwide survey from a random selection of educators and foodservice industry leaders. The purpose of this survey is to determine whether or not educational curricula are meeting the future needs of the foodservice industry. The information obtained from this study will serve as a most valuable tool in developing future curricula.

An attitude scale and a questionnaire will be used to gather the necessary information. The scale, questionnaire, and instructions are enclosed.

Please take a few minutes to complete the scale and questionnaires and return them in the enclosed self-addressed, stamped envelope by July 23, 1982. Please be assured that all answers to the survey will be strictly confidential.

Thank you very much for your time and assistance as it is most appreciated.

Very truly yours,

Mary Jo Hitchcock,
Professor

John E. Brady
Graduate Student

Sample Follow-Up Post Card

A few days ago you received an attitude scale and a questionnaire in the mail. Your response will be used in evaluating foodservice administration curricula in colleges and universities.

If you have not yet completed the survey, please take a few minutes at this time to complete and return the survey.

If you have completed and returned the survey, please accept this card as a note of appreciation.

Thanks again.

Sincerely,

John E. Brady
Graduate Student

APPENDIX C

Table C-1

Summary of Profile Data of a Typical Respondent

Item	Response		Percent of Response	
	Educators	Industry Executives	Educators	Industry Executives
Years with present employer	Less than five	6-10 years	40	32
Age	45-54 years	35-44 years	47	59
Yearly income	$20,000-$29,000	$60,000 or over	53	35
Major in college	Hotel and Restaurant Management	Other[a]	47	41
Graduated from college	1950-1959	1960-1969	40	41
Level of education	Post-graduate degree	Baccalaureate degree	80	44

[a]Just over 32% majored in business administration with 41% majoring in a field other than a foodservice related field, business administration, or education.

Table C-2

Mean Scores of Educators and Industry Executives From Semantic Differential

Respondent		Mean					
		Educators			Industry Executives		
Educators	Industry Executives	T	H	C	T	H	C*
1	1	19.2	18.3	17.2	18.0	18.2	13.9
2	2	20.1	20.7	20.7	18.2	14.8	15.2
3	3	20.5	20.6	19.5	16.8	16.9	12.3
4	4	18.7	19.8	16.8	16.1	16.2	14.9
5	5	17.9	15.8	13.4	16.0	14.7	17.1
6	6	18.9	19.7	16.7	14.7	18.3	16.5
7	7	20.4	19.3	19.2	17.1	15.6	15.7
8	8	18.6	16.8	16.7	17.8	19.7	17.8
9	9	17.6	15.0	15.7	18.3	18.3	19.2
10	10	19.6	18.4	16.7	18.0	18.3	16.8
11	11	18.4	16.9	19.3	18.3	14.9	14.7
12	12	19.5	16.1	17.2	17.6	17.4	17.4
13	13	15.6	14.9	16.6	17.5	16.4	13.3
14	14	18.7	18.7	17.2	19.1	19.3	19.1
15	15	15.2	14.8	12.1	18.3	19.2	18.3
	16				14.9	16.9	15.3
	17				18.0	18.6	16.5
	18				19.4	16.9	17.2
	19				14.0	17.8	15.5
	20				13.1	15.0	12.4
	21				17.8	13.9	12.5
	22				15.3	14.7	13.5
	23				19.5	17.5	15.3
	24				19.1	19.1	18.0
	25				16.9	17.7	17.4
	26				18.0	19.0	16.5
	27				18.8	18.4	16.8
	28				16.4	18.2	16.8
	29				17.9	16.6	17.0
	30				12.2	14.5	12.2
	31				18.7	18.0	18.0
	32				18.3	19.4	18.5
	33				16.0	17.7	13.6
	34				19.4	17.0	16.2

*T--Technical skills
H--Human skills
C--Conceptual skills

Table C-3

Two-Way ANOVA Summary

Source of Variation	Sum of Squares	Degrees of Freedom	Variance Estimate	F
Between Rows	4161.6	1	4161.6	10.15[a]
Between Columns	4533.5	2	2266.75	5.53[b]
Interaction	176.5	2	88.3	.22
Within Cells	34455.6	84	410.18	
Totals	43327.3	89		

[a]An F ratio of 3.96 is required for significance at the .05 level for 1 and 80 degrees of freedom.

[b]An F ratio of 3.11 is required for significance at the .05 level for 2 and 80 degrees of freedom.

Table C-4

t Test Analysis for Independent Samples of Educators and Industry Executives--Semantic Differential

Variable	Mean		Variance		*t*
	Educators (N=15)	Industry Executives (N=34)	Educators (N=15)	Industry Executives (N=34)	
Technical	18.59	17.2	2.39	3.30	12.4*
Human	17.7	17.2	4.38	2.68	.91
Conceptual	17.0	15.9	4.95	4.22	1.68*

*A *t* value of 1.68 is required for significance at the .05 level for 40 degrees of freedom.

Table C-5

t Test Analysis for Correlated Samples of Educators and Industry Executives Between Skills[a]

Variable	Group	D[b]	D^2	t
Technical-Human	Educators	13.1	34.55	2.63[c]
Technical-Conceptual	Educators	23.9	70.1	4.08[c]
Human-Conceptual	Educators	10.8	48.98	1.63[d]
Technical-Human	Industry Executives	.3	116.87	.027
Technical-Conceptual	Industry Executives	44.2	172.77	4.06[e]
Human-Conceptual	Industry Executives	43.9	131.33	5.0[e]

[a]Educators N=15
Industry Executives N=34

[b]D=difference

[c]A t value of 1.76 is required for significance at the .05 level for 14 degrees of freedom.

[d]A t value of 1.345 is required for significance at the .10 level for 14 degrees of freedom.

[e]A t value of 1.697 is required for significance at the .05 level for 30 degrees of freedom.

Table C-6

Rank Order of Concepts by Mean Scores Within Skill Levels-Semantic Differential

	Educators (N=15)		Industry Executives (N=34)	
Rank	Concept	Mean	Concept	Mean
	Technical skills			
1	Sanitation	20.73	Sanitation	19.58
2	Quantity Food Production	20.20	Accounting Principles	18.64
3	Accounting Principles	20.06	Quantity Food Production	18.50
4	Quantity Food Purchasing	20.06	Quantity Food Purchasing	18.14
5	Food Production Management	19.46	Food Production Management	17.82
6	Layout and Design	18.06	Report Writing	16.88
7	Equipment Design	17.93	Nutrition	16.05
8	Nutrition	17.20	Layout and Design	15.79
9	Report Writing	17.00	Equipment Design	15.29
10	Convenience Food Production	15.20	Convenience Food Production	15.17
	Human skills			
1	Communication	20.66	Communication	19.94
2	Human Motivation	19.26	Human Motivation	19.79
3	Leadership Theory	19.13	Leadership Theory	19.47
4	Business Law	18.73	Human Resource Management	18.85
5	Human Resource Management	18.73	Organization Behavior	16.97
6	Management Union Relations	17.80	Management Union Relations	16.76
7	Organization Behavior	16.73	Human Nature	15.82
8	Human Nature	16.40	Counseling Theory	15.35
9	Sociology	15.93	Business Law	14.91
10	Counseling Theory	13.80	Sociology	14.20

Table C-6 (continued)

Rank	Educators (N=15) Concept	Mean	Industry Executives (N=34) Concept	Mean
		Conceptual skills		
1	Financial Analysis	19.80	Marketing	18.88
2	Marketing	19.60	Financial Analysis	18.11
3	Data Analysis	18.80	Data Analysis	17.26
4	Psychology of Business	18.53	Salesmanship	17.00
5	Systems Management	16.93	Systems Management	15.94
6	Psychology of Advertising	16.73	Psychology of Business	15.88
7	Salesmanship	16.66	Risk Management	15.32
8	Contract Negotiations	16.00	Contract Negotiations	15.20
9	Risk Management	14.66	Psychology of Advertising	14.52
10	Philosophy	12.26	Philosophy	11.08

Table C-7

Overall Rank Order of Concepts by Mean Scores-
Semantic Differential

	Educators (N=15)		Industry Executives (N=34)	
Rank	Concept	Mean	Concept	Mean
1	Sanitation (T)*	20.73	Communication (H)	19.94
2	Communication (H)	20.66	Human Motivation (H)	19.79
3	Quantity Food Production (T)	20.20	Sanitation (T)	19.58
4	Accounting Principles (T)	20.06	Leadership Theory (H)	19.47
5	Quantity Food Purchasing (T)	20.06	Marketing (C)	18.88
6	Financial Analysis (C)	19.80	Human Resource Management (H)	18.85
7	Marketing (C)	19.60	Accounting Principles (T)	18.65
8	Food Production Management (T)	19.46	Quantity Food Production (T)	18.50
9	Human Motivation (H)	19.26	Quantity Food Purchasing (T)	18.14
10	Leadership Theory (H)	19.13	Financial Analysis (C)	18.11
11	Data Analysis (C)	18.80	Food Production Management (T)	17.82
12	Human Resource Management (H)	18.73	Data Analysis (C)	17.26
13	Business Law (H)	18.73	Salesmanship (C)	17.00
14	Psychology of Business (C)	18.53	Organization Behavior (H)	16.97
15	Layout and Design (T)	18.06	Report Writing (T)	16.88
16	Equipment Design (T)	17.93	Management Union Relations (H)	16.76
17	Management Union Relations (H)	17.80	Nutrition (T)	16.05
18	Nutrition (T)	17.20	Systems Management (C)	15.94
19	Report Writing (T)	17.00	Psychology of Business (C)	15.88
20	Systems Management (C)	16.93	Human Nature (H)	15.82

Table C-7 (continued)

Rank	Educators (N=15) Concept	Mean	Industry Executives (N=34) Concept	Mean
21	Organization Behavior (H)	16.73	Layout and Design (T)	15.79
22	Psychology of Advertising (C)	16.73	Counseling Theory (H)	15.35
23	Salesmanship (C)	16.66	Risk Management (C)	15.32
24	Human Nature (H)	16.40	Equipment Design (T)	15.29
25	Contract Negotiations (C)	16.00	Contract Negotiations (C)	15.20
26	Sociology (H)	15.93	Convenience Food Production (T)	15.70
27	Convenience Food Production (T)	15.20	Business Law (H)	14.91
28	Risk Management (C)	14.66	Psychology of Advertising (C)	14.20
29	Counseling Theory (H)	13.80	Sociology (H)	14.20
30	Philosophy (C)	12.26	Philosophy (C)	11.08

*T--Technical Skill
H--Human Skill
C--Conceptual Skill

Table C-8

Percent of Response to Likert Scale With Regard to Directionality

Statement	Percent of Response					
	Educators			Industry Executives		
	Positive	Neutrality	Negative	Positive	Neutrality	Negative
1. It has been suggested that a communication gap exists between educators and the foodservice industry. How do you feel about this statement?	80.0	6.7	13.3	73.5	20.6	5.9
2. Most college graduates in foodservice management are better prepared as technicians rather than as managers.	46.7	0	53.3	79.4	5.9	14.7
3. Most baccalaureate degree programs in foodservice management prepare students for managerial positions in the foodservice industry.	80.0	6.7	13.3	38.2	8.8	52.9

Table C-8 (continued)

Statement	Percent of Response					
	Educators			Industry Executives		
	Positive	Neutrality	Negative	Positive	Neutrality	Negative
4. Work-experience programs are vital in preparing students for foodservice managerial positions.	100.0	0	0	97.1	2.9	0
5. Human skills emphasize human relations and conceptual skills emphasize creativity. More emphasis should be placed on human and conceptual skill development in baccalaureate degree programs rather than technical skill development.	60.0	20.0	20.0	73.5	2.9	23.5
6. As managers progress up the managerial hierarchy, conceptual skills become more important than technical skills.	93.3	6.7	0	88.2	0	11.8

Table C-8 (continued)

Statement	Percent of Response					
	Educators			Industry Executives		
	Positive	Neutrality	Negative	Positive	Neutrality	Negative
7. The foodservice industry is better able to teach technical skills than are educational institutions.	60.0	6.7	33.3	64.7	11.8	23.5
8. Educational institutions should place more emphasis on quantity food production courses rather than management courses.	13.3	13.3	73.3	17.6	17.6	64.7
9. Human and conceptual skills enable students to think like managers	87.7	13.3	0	85.3	5.9	8.8
10. Academic institutions are meeting the needs of industry in preparing students for foodservice management positions.	60.0	13.3	26.7	38.2	14.7	47.1

Table C-9

Percent of Response to Likert Scale With Regard to Intensity

Statement	Percent of Response													
	Educators							Industry Executives						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7[a]
1. It has been suggested that a communication gap exists between educators and the foodservice industry. How do you feel about this statement?	6.7	46.7	26.7	6.7	13.3	0	0	23.5	20.6	29.4	20.6	2.9	2.9	0
2. Most college graduates in foodservice management are better prepared as technicians rather than as managers.	6.7	20.0	20.0	0	26.7	20.0	6.7	14.7	32.4	32.4	5.9	2.9	8.8	2.9
3. Most baccalaureate degree programs in foodservice management prepare students for managerial positions in the foodservice industry.	13.3	46.7	20.0	6.7	6.7	6.7	0	0	14.7	23.5	8.8	32.4	11.8	8.8
4. Work-experience programs are vital in preparing students for foodservice managerial positions.	73.3	20.0	6.7	0	0	0	0	0	61.8	23.5	11.8	2.9	0	0

Table C-9 (continued)

Statement	Percent of Response													
	Educators							Industry Executives						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7[a]
5. Human skills emphasize human relations and conceptual skills emphasize creativity. More emphasis should be placed on human and conceptual skill development in baccalaureate degree programs rather than technical skill development.	6.7	26.6	26.6	20.0	20.0	0	0	0	14.7	44.1	14.7	2.9	14.7	8.8
6. As managers progress up the managerial hierarchy, conceptual skills become more important than technical skills.	60.0	33.3	0	6.7	0	0	0	0	41.2	44.1	2.9	0	8.8	2.9
7. The foodservice industry is better able to teach technical skills than are educational institutions.	13.3	6.7	40.0	6.7	0	26.6	6.7	14.7	35.2	14.7	11.8	11.8	11.8	0
8. Educational institutions should place more emphasis on quantity food production courses rather than management courses.	0	0	13.3	13.3	26.7	33.3	13.3	2.9	2.9	11.8	17.6	26.4	35.3	2.9

Table C-9 (continued)

Statement	Percent of Response													
	Educators							Industry Executives						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7[a]
9. Human and conceptual skills enable students to think like managers	13.3	46.7	26.7	13.3	0	0	0	2.9	44.1	38.2	5.9	5.9	2.9	0
10. Academic institutions are meeting the needs of industry in preparing students for foodservice management positions.	13.3	20.0	26.7	13.3	6.7	20.0	0	0	8.8	29.4	14.7	26.4	11.8	8.8

[a]1--Strongly agree
2--Agree
3--Somewhat agree
4--Neutrality
5--Somewhat disagree
6--Disagree
7--Strongly disagree

Table C-10

t-Test Analysis For Independent Samples on Likert Scale

Statement	Mean		Variance		t
	Educators (N=15)	Industry Executives (N=34)	Educators (N=15)	Industry Executives (N=34)	
1. It has been suggested that a communication gap exists between educators and the foodservice industry. How do you feel about this statement?	5.27	5.32	1.35	1.68	1.27
2. Most college graduates in foodservice management are better prepared as technicians rather than as managers.	3.93	5.12	3.50	2.41	2.32*
3. Most baccalaureate degree programs in foodservice management prepare students for managerial positions in the foodservice industry.	5.33	3.70	1.95	2.39	3.5*

Table C-10 (continued)

Statement	Mean		Variance		t
	Educators (N=15)	Industry Executives (N=34)	Educators (N=15)	Industry Executives (N=34)	
4. Work-experience programs are vital in preparing students for foodservice managerial positions.	6.67	6.44	.381	.695	.966
5. Human skills emphasize human relations and conceptual skills emphasize creativity. More emphasis should be placed on human and conceptual skill development in baccalaureate degree programs rather than technical skill development.	4.8	5.15	1.6	2.72	.73
6. As managers progress up the managerial hierarchy, conceptual skills become more important than technical skills.	6.47	6.0	.70	1.76	1.24

Table C-10 (continued)

Statement	Mean		Variance		t
	Educators (N=15)	Industry Executives (N=34)	Educators (N=15)	Industry Executives (N=34)	
7. The foodservice industry is better able to teach technical skills than are educational institutions.	4.2	4.94	3.74	2.66	1.38
8. Educational institutions should place more emphasis on quantity food production courses rather than management courses.	2.8	3.21	1.66	1.86	.99
9. Human and conceptual skills enable students to think like managers	5.6	5.24	.829	1.09	1.16
10. Academic institutions are meeting the needs of industry in preparing students for foodservice management positions.	4.6	3.71	2.97	2.15	1.87*

*A t value of 1.68 is required for significance at the .05 level for 40 degrees of freedom.

APPENDIX D

Representative Comments From

Industry Executives

One of the biggest problems facing recent graduates is being able to properly handle the responsibilities and match them up [with] the appropriate personnel to perform.

With the explosion of foodservice in the past 5-10 years, the major problem facing our industry is that too few "managers" really understand our product ... food. Graduates must come out with a thorough knowledge of food handling, preparation, etc.

Conceptual learning is necessary but must be reinforced through actual on the job behaviors, not solely in simulation or classrooms. There is a talent to managing. Everyone does not possess the talent to manage. If the talent is not there, you cannot "teach" it in.

I suggest better screening and assessment of candidates for foodservice programs before wasting their or the school's time.

We need to institute a lot of changes in the foodservice educational system to properly prepare students for the demands of [the] industry.

VITA

John E. Brady was born on September 5, 1944 in Corinth, Mississippi. He grew up on the Gulf Coast and graduated from Gulfport High School, Gulfport, Mississippi in 1962.

After high school he attended the University of Southern Mississippi where he earned a Bachelor of Science degree in Institution Management--Commercial in August, 1967. He received a direct commission in the U.S. Army Medical Specialist Corps in 1967 and completed an Army Dietetic Internship at Brooke Army Medical Center in 1968.

Major Brady has been assigned to a variety of food-service administrative positions throughout the United States. He also served two years in Bangkok, Thailand and three years in the "Walled City" of Berlin, Germany.

Major Brady is a Registered Dietitian, a member of The American Dietetic Association, The New South Wales Institute of Dietetics, and Omicron Nu.

The author is married to the former Rita R. Likins of Biloxi, Mississippi, and the father of two children, Michael and Kelly.